2009 H1N1 Influenza
Updated Key Points
December 4, 2009

What's New and Updated

- Activity Update
- International Situation Update
- 2009 H1N1 Influenza Vaccine
- 2009 H1N1 Influenza Vaccine Safety
- Seasonal Influenza Vaccine

A Summary of CDC Key Public Health Messages this Season

Flu activity in the United States declined from November 22-28, 2009, as reported in FluView, but remains high overall compared to what is expected for this time of year.

- Influenza is unpredictable—flu activity may continue for several weeks and it's possible that other waves of influenza may occur caused by either 2009 H1N1 viruses or regular seasonal flu viruses.
- CDC recommends a three-step approach to fighting the flu:
    - vaccination;
    - everyday preventive actions, including covering coughs and sneezes, frequent hand washing, and staying home when sick;
    - and the correct use of antiviral drugs if your doctor recommends them.
- Supplies of 2009 H1N1 vaccine are limited but continue to increase. More doses are expected for shipment each week. We ask members of the public who want to receive this vaccine to be patient as this program expands and more vaccine becomes available.
- It's very important that antiviral drugs be used early to treat flu in people who are very sick (for example people who are in the hospital) and people who are sick with flu and have a greater chance of getting serious flu complications, like people with asthma, diabetes or people who are pregnant.

Activity Update

- Each week CDC analyzes information about influenza disease activity in the United States and publishes findings of key flu indicators in a report called FluView.
- Information collected during the week of November 22-28, 2009, is being reported in FluView on December 4, 2009.
- Below is a summary of the most recent key indicators:

2009 H1N1 Influenza
Updated Key Points
December 4, 2009

- Visits to doctors for influenza-like illness (ILI) nationally decreased again this week over last week. This is the fifth consecutive week of national decreases in ILI after four consecutive weeks of sharp increases.

    - Eight of ten regions continue to report ILI activity above what is expected for this time of year.
    - Two regions (Region 6 and Region 10) are reporting little ILI activity.
    - While ILI has declined, visits to doctors for influenza-like illness still remain elevated nationally.

- Influenza hospitalization rates have decreased across all age groups but remain higher than expected for this time of year. Though declining, hospitalization rates continue to be highest in children 0-4 years old.

- The proportion of deaths attributed to pneumonia and influenza (P&I) based on the 122 Cities Report declined over the previous week, but continues to be higher than expected for this time of year. This is the ninth consecutive week that the proportion of deaths attributed to pneumonia and influenza (P&I) has been above the epidemic threshold.

- In addition, 17 flu-related pediatric deaths were reported this week: 12 of these deaths were associated with laboratory confirmed 2009 H1N1 and 5 were associated with influenza A viruses, but were not subtyped.

- Since April 2009, CDC has received reports of 251 laboratory-confirmed pediatric deaths: 210 due to 2009 H1N1, 40 pediatric deaths that were laboratory confirmed as influenza, but the flu virus subtype was not determined, and one pediatric death associated with a seasonal influenza virus. (Laboratory-confirmed deaths are thought to represent an undercount of the actual number. CDC has provided estimates about the number of 2009 H1N1 cases and related hospitalizations and deaths.

- A table showing reports of flu-related pediatric deaths (including a cumulative total of 2009 H1N1 pediatric deaths since April, 2009) is available on the CDC website at http://www.cdc.gov/h1n1flu/updates/us/#pedh1n1cases .

- Since CDC began tracking pediatric flu-related deaths in 2003-2004, the number of pediatric deaths reported to CDC has ranged from 46 during the 2005-2006 season to the 189 deaths reported so far during the 2009-2010 season.

- Twenty-five states are reporting widespread influenza activity; a decline of 7 states from last week. They are: Alabama, Alaska, Arizona, California, Connecticut, Delaware, Florida, Indiana, Kentucky, Maine,

Maryland, Massachusetts, Michigan, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, Vermont, and Virginia. Seventeen states are reporting regional influenza activity, the District of Columbia, Puerto Rico and six states reported local influenza activity, and Guam, the U.S. Virgin Islands and two states reported sporadic influenza activity.

- Almost all of the influenza viruses identified so far continue to be 2009 H1N1 influenza A viruses.

- These viruses remain similar to the virus chosen for the 2009 H1N1 vaccine, and remain susceptible to the antiviral drugs oseltamivir and zanamivir with rare exception.

International Situation Update

- The 2009 H1N1 influenza virus is the predominant influenza virus in circulation in most countries worldwide.
- In temperate regions of the Southern Hemisphere, little disease activity due to 2009 H1N1 has been reported recently.
    - The epidemiology of disease caused by 2009 H1N1 influenza in the Southern Hemisphere has been very similar to what was described in the United States in the spring of 2009.
    - There have been no significant changes detected in the 2009 H1N1 influenza viruses isolated from persons in the Southern Hemisphere as compared to viruses isolated from persons in the Northern Hemisphere.
- In tropical regions of the Americas and Asia, influenza activity due to 2009 H1N1 remains variable.
- In temperate regions of the Northern Hemisphere, influenza like illness (ILI) activity due to 2009 H1N1 remains high across many countries in Europe and North America, though it may have peaked in most areas of the United States, Canada, and Northern and Western Europe.
- According to the World Health Organization (WHO), the majority of 2009 H1N1 influenza isolates tested worldwide remain sensitive to oseltamivir, an antiviral medicine used to treat influenza. Worldwide, 96 2009 H1N1 isolates tested have been found to be resistant to oseltamivir – 26 of these isolates were detected in the United States.
- The World Health Organization (WHO) continues to report updated 2009 H1N1 flu-associated laboratory-confirmed cases and deaths on its Web page (http://www.who.int/csr/disease/swineflu/updates/en/). These

laboratory-confirmed cases represent a substantial underestimation of total cases in the world, as many countries focus surveillance and laboratory testing only on people with severe illness.

- For the most recent week for which data are available (November 15 to November 21, 2009) 93% of influenza specimens reported to WHO were 2009 H1N1.
- On September 17, 2009, several countries including the United States announced plans to donate 2009 H1N1 vaccine or funds to support vaccination campaigns in less developed countries

2009 H1N1 Influenza Vaccine

In this Section:

- Announcements **(New)**
- Supply

Announcements

- **(New)** National Influenza Vaccination Week is a national observance that was established to highlight the importance of continuing influenza vaccination, as well as foster greater use of flu vaccine after the holiday season into January and beyond. This year's NIVW (originally scheduled for December 6-12, 2009) is being rescheduled and will likely be held in January. Updates will be provided as more information becomes available.
- **(New)** CDC has received reports of fraudulent emails (phishing) referencing a CDC sponsored State Vaccination Program. The messages request that users must create a personal 2009 H1N1 (swine flu) Vaccination Profile on the cdc.gov website. The message then states that anyone that has reached the age of 18 has to have his/her personal Vaccination Profile on the cdc.gov site. The CDC has **NOT** implemented a state vaccination program requiring registration on www.cdc.gov. Users that click on the email are at risk of having malicious code installed on their system.

Supply

- **(Updated)** As of Friday, December 4, 2009, a total of 72,615,300 doses were available for ordering. Of those available doses, doses were 55,097,700 injectable (flu shots) and 17,517,600 were LAIV (nasal spray vaccine
- **(Updated)** As of Thursday, December 3, 2009, there were a total of 66,490,200 doses ordered.

- Supplies of 2009 H1N1 vaccine continue to increase. More doses are expected for shipment each week. We ask members of the public who want to receive this vaccine to be patient as this program expands and more vaccine continues to become available.

2009 H1N1 Influenza Vaccine Safety

In this section:

- *VAERS Limitations*
- *MMWR: Monitoring the Safety of Influenza A (H1N1) 2009 Monovalent Vaccines in the United States, Preliminary Findings*

- Getting the 2009 H1N1 influenza vaccine is much safer than getting H1N1 influenza. You can prevent 2009 H1N1 influenza illness by getting the 2009 H1N1 vaccine.

- The benefits of getting the 2009 H1N1 influenza vaccine far outweigh the very small risk of serious complications from vaccination. Some people getting vaccinated will have mild side effects such as pain, redness or swelling in the arm where the shot was given or a runny nose and headache after the nasal spray vaccine.

MMWR: Monitoring the Safety of Influenza A (H1N1) 2009 Monovalent Vaccines in the United States, Preliminary Findings

- In this MMWR CDC reports on the preliminary safety results for the 2009 H1N1 influenza vaccines from the first months of reports received through the U.S. Vaccine Adverse Event Reporting System (VAERS), a national surveillance system and data from the Vaccine Safety Datalink.

- The VAERS database was searched to identify all U.S. reports received of adverse events following vaccination with 2009 H1N1 vaccines and 2009 seasonal influenza vaccines from July 1, 2009 through November 24, 2009.

- Data from VAERS show that in post-licensure monitoring, the overall reporting rate after 2009 H1N1 vaccination is higher than that for seasonal influenza vaccination. Although this might represent an actual difference in safety, increased reporting rates are expected due to the efforts to enhance reporting to VAERS and the heightened public awareness of the 2009 H1N1 vaccine.

- As of November 24, 2009, nearly 52 million doses of 2009 H1N1 vaccine had been shipped to vaccination providers in the United States.

- As of November 24, 2009, VAERS had received 3,783 adverse event reports following 2009 H1N1 vaccination.

- The vast majority (95%) of adverse events reported to VAERS after receiving the 2009 H1N1 vaccine were not serious (e.g., soreness at the vaccine injection site).

- Of the 3,783 reports, 204 (5%) were reports that involved what would be considered serious health events (defined as life threatening or resulting in death, major disability, abnormal conditions at birth, hospitalization, or extension of an existing hospitalization).

- The percentage of reports involving what would be considered serious health events is not substantially different between 2009 H1N1 and seasonal influenza vaccines. Additionally, no new or unusual events or pattern of adverse events have emerged. VAERS reports continue to be monitored as more vaccine is administered.

- Among the 204 reports of serious health events after H1N1 vaccination, there were 13 reports of death.

- The 13 VAERS reports that involve deaths are under review by CDC, FDA and the states where the reported deaths occurred. Preliminary findings do not indicate a common cause or pattern (such as similarities in age, gender, geographic location, illness surrounding death, or underlying medical conditions) to suggest that these deaths were associated with the vaccine. These cases are under further review pending additional medical records (e.g. autopsy reports, medical files).

- VAERS received 10 reports of Guillian-Barré syndrome (GBS) of which follow-up assessments are underway. An additional 2 reports describing neurologic events are also under review as possible GBS. In the United States, about 80-160 cases of GBS are expected to occur each week, regardless of vaccination.

- Eleven (11) reports of anaphylaxis were received by VAERS; an additional 8 reports of possible anaphylaxis were identified. Of these 19, 13 met Brighton Collaboration case definition criteria, five had an anaphylaxis diagnosis on medical record review, and one has not been confirmed. These 19 reported cases of anaphylaxis are not at a rate above the background rate for this adverse event.

CDC has enhanced vaccine safety monitoring efforts in several ways:

- The Vaccine Adverse Event Reporting System (VAERS) is a voluntary reporting system that identifies potential vaccine safety signals: healthcare providers are actively reminded to report clinically significant adverse events after vaccination, even if they are not sure if the vaccine

caused the adverse event, and medical personnel are conducting daily reviews and follow-up [http://vaers.hhs.gov].

- Second, a new Web-based active surveillance system is being implemented to prospectively follow tens of thousands of vaccinated people [www.myflushot.org].

- Third, large population-based systems that link computerized vaccination data with healthcare codes are being used to conduct rapid and ongoing analyses. This approach includes data from large managed care plans, other health plans, Department of Defense, Medicare and the Veterans' Administration.

- Fourth, active case finding for Guillain-Barré syndrome (GBS) is being conducted in 10 areas of the United States (a combined population of about 45 million people).

- Findings from all sources are cross-referenced and reviewed by government and outside scientists to be sure any concerns are rapidly addressed.

Seasonal Influenza Vaccine

Seasonal Influenza Vaccine Supply and Distribution

- Due to early availability and high demand of seasonal flu vaccine, limited amounts of seasonal supply remain. At this point, CDC continues to encourage those at highest risk from flu complications to seek seasonal flu vaccine and receive 2009 H1N1 vaccine, as recommended.

- **(Updated)** As of November 27, approximately 104.8 million doses of seasonal influenza vaccine have been distributed. This is 91% of the doses expected this season.

- Local areas may not have received as much vaccine as they anticipated at this point in the season and providers seeking additional vaccine now may be unable to purchase it. For more information about seasonal supply, please refer to IVATS (http://www.preventinfluenza.org/ivats/) over the coming weeks.

- More information about seasonal flu vaccine supply can be found at: http://www.cdc.gov/flu/professionals/vaccination/#supply